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OFFICIAL JOURNAL OF
THE MUSHROOM GROWERS'
ASSOCIATION

MGA BULLETIN

MAY, 1952 · NUMBER 29

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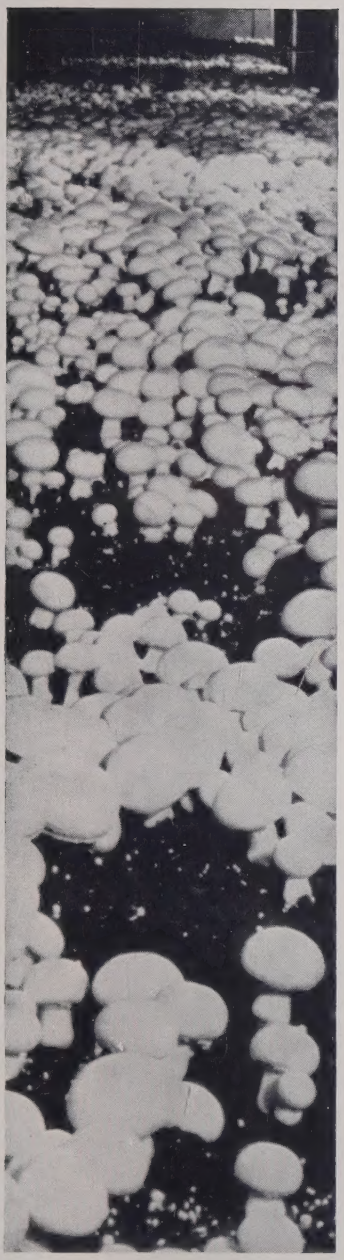

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The NEW
MGA BULLETIN

MAY 1952
NUMBER 29

EDITORIAL:

Local Publicity

We are all aware that articles about mushrooms are appearing in newspapers and magazines more frequently than ever before. It is a most valuable field of publicity, as a few brief extracts will show :

" I think mushrooms must be one of the most difficult things in the world to grow," says **Sir Thomas Lea,** in an illustrated interview with the *Stourport News* (1.2.52).

"A few mushrooms, of course, would help a great deal," suggests **André Simon** in the Squirrels As Food controversy in the *Sunday Times* (25.11.51).

" Unlike field mushrooms, cultivated mushrooms need not be peeled. The peel is a wholesome and integral part of the cultivated mushroom. Yet I have the greatest difficulty in making people realise this," says **Stanley Middlebrook,** interviewed by the *Selby Times* (30.11.51).

" Mushroom growing is a highly specialised process . . . . . They are rich in Vitamin B and contain more protein than any other comparable fruit or vegetable," says **Eric J. Hall** to the *Essex County Standard* (14.9.51). And as " an expert cook," he gives a few tasty recipes.

Here and there, in one way or another, little points like this appear as news rather than blatant publicity, and the cumulative good done to the industry must be immense. The basic theme is : Mushrooms are very tricky to grow, require much capital and infinite attention, are tasty and very good for you.

What we do *not* want are interviews such as **G. M. Riley** gave to the *Birmingham Sunday Mercury* (16.9.51) in which he is reported to have expressed the belief that " mushrooms will soon be available to housewives at a price comparable with the ordinary prices of tomatoes." Presumably he was referring to spawned-and-cased trays which are now being sold to the public and which " result in customers getting mushrooms at a price of less than 2s. a pound."

Good publicity for the trays, no doubt ; but scarcely helpful to the Mushroom Industry.

Fred C. Atkins.

AMERICAN NEWS LETTER

Some Comments from Dr. J. W. Sinden

An article on American growing methods in a recent trade paper appeared to contain a number of factual errors, and a copy was sent to Dr. J. W. Sinden for his observations. He has replied:

The reason why a majority of the mushrooms are grown in standard mushroom houses in America is that this system had developed before the two-zone system was discovered in 1935. Even after that it was many years before this system was perfected to the point where it was really better than the previous. Meanwhile standard houses continued to be built. Because of their construction they do not lend themselves at all to conversion to the tray-system. Therefore the growers that have standard mushroom houses cannot adopt the more efficient method.

If one realizes that the 15—20 million pounds that are now grown per year on trays represents a new growth of the mushroom industry and that if one compares the number of sq. ft. of bed built in the last 10 years, **the standard system is almost insignificant in proportion.** The advantages mentioned of the standard system therefore become unimportant.

Mr. L. F. Lambert was not the originator of pure culture spawn as reported. Dr. Duggar developed spore culture by 1912, long before Mr. Lambert adopted it.

The reporter's figure concerning the number of growers is far from accurate. There are 400 in Chester County alone and probably nearly 1,000 in the country as a whole. Production according to latest figures from the department of agriculture is nearly double the 35 million pounds mentioned. The 10 largest growers probably produce almost 30 million pounds.

Synthetic compost is too new to be recognised by some people. Probably in Chester County alone last year about one million pounds were grown on synthetic compost and in the rest of the country another two million. Out of the 70 million pounds, this is a small proportion, but as it represents one year's development **it is of considerable significance.**

It is now estimated that at least two-thirds of the mushroom crop is canned or made into canned soup. The price of mushrooms for the canning industry to a large extent regulates the price of fresh mushrooms in most big city markets.

The quoted production cost of 15 cents a pound is ridiculously low. The labour of picking, alone, is at least 5 cents a pound. In Chester County the grower who has an average crop has costs of nearly 30 cents a pound. A few of the most efficient growers in trays have been able to reduce their costs to 22—25 cents.

This covers most of the glaring inaccuracies and, I think, *shows the fallacy in allowing a person to visit another country for a few days and then return and write a report on what he has seen.* I think in general such reports have little value.

Mr. Middlebrook Consults His Diary

Mar. 8th. Startling results from two spawns in one house. 500 sq. ft. each. Same soil, same compost, same treatment. In 23 days one has given 1·75 and the other 1 lb. per sq. ft. I leave the spawn makers guessing, but would hazard a wager that 100% of them claim the first.

Mar. 10th. Should we use fish boxes or the standard 2′ × 3′ ? " Ha, Ha, Middlebrook is coming round to trays," yells the triumphant chorus. But IS he ? 1,000 sq. ft. on shelves at 2 lb. per sq. ft. three times a year equals 6,000 lb. On trays in the same house 1,500 sq. ft. at 1 lb., four times a year equals 6,000 lb. One lb. isn't good enough on trays, chants the chorus. Unabashed comes my solo reply, a two lb. crop isn't good enough on trays. And what about that seventh house you need to propagate for six growing houses ? It could be producing from shelves. " Fish boxes, or standard 2′ × 3′ ?" Neither ! It just doesn't matter !

Mar. 11th. The ideal farm might contain two long rows of houses set on each side of a covered space slightly wider than the houses' length. All beds would be on rollers or tracks and be drawn out of the houses one at a time for any and almost every operation to be completed under the covered yard. Electrically controlled, of course. *Chorus :* A mechanised tray system is virtually the same thing. *Solo :* Nonsense ! How do you like watering, picking and trashing floor trays with an 8″ clearance ?

Mar. 14th. A job needed doing. The man who was supposed to do it stood languidly contemplating the direction of the line of least resistence. With little ado I set about it myself and did it. After I left, the dreamer is reported to have said, " If everybody worked as hard as the boss, half of us would be out of a job." A compliment to me ? No ! A reflection on the times, more likely.

Mar. 16th. All our houses run North and South. Cropping nearly always starts first in the North end of the beds, a feature that is most noticeable in the Handcrafts. I suppose it is our old friend ' ventilation ' again.

Mar. 17th. Call me a failure, if you like. I don't mind. When it comes to trays I am just that. We are seriously thinking of turning our three tray houses back to shelves. I often wonder who started this tray racket. The Americans ? The English grower ? Or the . . . . . but I'd better be careful ; it's wise to plant no evil. *Chorus :* The greatest revolution of our times. *Solo :* The Great Delusion. Anyway, a grand lot of trays for sale, gentlemen ; make yourselves a lot of money, quickly and without effort. Cheap, gentlemen, going, going . . . . . .

Mar. 20th. While I was in Worthing I was amazed at the prime quality of mushrooms at the Show and on one or two farms I visited. " We can't grow this quality," I kept saying. But during the last week or two our quality has lifted itself up to exhibition standard. Have we done something " right," or is it just the weather ? Spring in the air, and all that. It's quite unusual.

Mar. 21st. Trays in our glasshouse almost 100% affected by truffle. In a Handcraft, trays with same compost and soil are only about 5% affected. Truffle occurs mainly in summer, say the books. Summer in Yorkshire is usually in July and August. The glasshouse has higher temperature but lower humidity than the Handcraft.

Mar. 22nd. Any connection between biting North-East winds and dry mushrooms ? One well-known grower at least will back me up when I say that such winds do us no good.

Mar. 23rd. There are odd times when one can free oneself from the yoke of mushroom growing and give free rein to self-expression. To-day, to make way for a more substantial packing shed and store, we are demolishing a most unsightly creosoted converted henhouse. In happy evidence are heavy hammers, crowbars, joyous havoc, wreck, wrack, annihilation, doom. There is a special relief in wielding the axe of destruction after the weary wearing of one's nerves on the dainty, delicate task of humouring the shy agaricus. Like wreaking vengeance on the unknown.

Mar. 25th. " Quite an Industry," said a visitor, looking down our line of houses to-day. This is a common expression of surprise. So many people seem to have the impression that commercial mushroom growing is a hobby or a joke.

Mar. 26th. Now that we're back on to our normal soil we are returning to normal production. Our makeshift soil produced its first lb. per sq. ft. in about 28 days. Now we're back to 14 or 15 days. The most important person in the mushroom world to-day is the man who is working on soils. I see no reason why a first flush should not regularly give 1 lb. per sq. ft. We have done it on a small scale on one occasion, and what's been done once should be repeatable. With one lb. regularly in 14 days then clearing out, tray enthusiasts could get 10 crops per year. Like all tray propositions this sounds beautiful—on paper.

Mar. 27th. It seems odd to be preparing for our cold room while snowflakes are floating horizontally from the east.

April 3rd. Is it possible that Krilium, the new synthetic " soil conditioner," may have properties useful to the mushroom grower ? According to an American correspondent in a trade paper, Krilium, with a granular and open soil " apparently acts on these particles and sticks them together . . . . . and once having done so resists the destructive action of the elements . . . . . soil will absorb larger quantities of water . . . . . Krilium is not to be confused with humus . . . . . not a plant food . . . . . being a synthetic substance it resists the normal bacterial action and remains apparently unchanged for a considerable length of time in the soil."

April 4th. Our boiler man occasionally helps to pick on " big " days. " When I get cracking," I heard him say, " there's 500 lb. picked before you can say ' coke '. I'm supersonic."

Research Appeal, 1952

Contributions received from the 26th February to 1st April

	£	s.	d.
Middlebrook, S	25	0	0
Sparling, T. A. G.	5	0	0
Nichols, Brig. J. S.	5	0	0
Reeve, E. (U.S.A.)	3	9	10
Parsons, Mrs. R.	3	3	0
Lichtarowicz, L.	3	1	0
Lachlan Mushroom Co. (Australia)	2	19	0
Leach, T. T.	1	1	0
Lee, C. C.	1	1	0
Allen, R. Ivan	1	0	0
Wilkinson, Geo.	1	0	0
Bankers' Orders	30	10	0
	82	4	10
Less Charges on Subscription from South Africa		3	7
	82	1	3
Brought forward from Bulletin No. 28	794	12	5
Total	£876	13	8

SHRINKING AVOIDED

Mr. Oliver Robinson, the Editor of *Good Housekeeping*, wrote in his Newspage in December, 1950 : " We feel respect and gratitude for the professional (mushroom) growers. And our only wish is that they would develop a strain that will not shrink to half its size when cooked."

This last sentence was quoted in our April Bulletin, 1951, where it was seen by **Haidée Lacy-Hulbert.** She at once wrote to the *M.G.A. Bulletin :*

" Tell your members to dip the mushrooms in boiling water for half-a-minute before frying. They will not then be the awful little sponges of grease that one so often gets (or used to get) with bacon-and-mushrooms. I speak as a Belgian-trained chef and a member of the Wine and Food Society."

We passed on the tip to Mr. Robinson, and now, in the April issue of *Good Housekeeping*, he writes : " We referred this to the Institute for checking, and have much pleasure now in rushing into print with the news that their tests completely endorse it. They tell us that the boiling water bleaches and swells the mushrooms slightly. They do not absorb so much fat, remain firmer, look better and are more palatable. Thank you, Mr. Atkins, and our thanks to your friend."

NEWCOMERS TO THE M.G.A.

Bacchi, R. A., Roghan Road, Zillmere, Brisbane, Australia.
Grant, G. F. B., Church House, Washington, Pulborough, Sussex.
Higgins, W., Standard Nurseries, Old Worthing Road, East Preston, Sussex.
Hulley, P., Orkney Farm, P.O. Umtali, S. Rhodesia.
Kessler, D. F., Bridge Farm, Stoke Hammond, Bletchley, Bucks.
Kimmins, H. A., 5 Garrick Road, Worthing, Sussex.
O'Rourke, W. B., 138 Howth Road, Clontarf, Dublin, Eire.
Petersen, H., Raunshoj, Bregnerod pr Birkerod, Denmark.
Roberts, M. G., 121 Abbey Road, Belvedere, Kent.
Rowley, J. D., Kingsheath Nurseries, Cribbs Causeway, Bristol, Glos.
Sandford, Capt. A., Searles Gardens, Fletching, Sussex.
Simms, H., Messrs. Stuart & Simms, Burstwick, Hull, Yorks.

HONORARY MEMBERS

Capelli, André, Place de Strasbourg, Mesnil-le-Roi, (S. et O.), France.
Gray, L. C. N., Bracknell Mushrooms Ltd., Skimped Hill, Bracknell, Berks.
Gregory, L., 2 Westwood Park, London, S.E.23.
Sanders, S. T., c/o Hartstoke Fruiterers Ltd., Brentford Market, Brentford, Middx.
Williams, J. (Wholesaler), Brentford Market, Brentford, Middx.

JOHN ATKINS examines . . . . . .

THE COST OF COMPOSTING

W.th the continuing rises in costs and dwindling profits it becomes ever more important for the mushroom grower to examine and re-examine his costs. The following remarks on the cost of composting are an attempt to see a little way through the confusing fog of claims about this and that method of composting and about this and that machine.

Recently a few sketchy figures from two farms have become available, one farm very enterprisingly cutting down on labour by mechanisation and the other working on the principle that output is more important than labour costs : both farms appear to be efficient.

The cost of composting is the sum of the wage bill, the depreciation of the machinery used and overheads. For our purpose we submit that overheads will remain substantially unchanged if we change our methods and they are omitted from our present estimates.

But for the grower it does not end there, for he wants to know how his profit is affected. In other words if cutting down on composting cost by £100 results in £100 less income he is no better off and may indeed be worse off because any change in method of working is a change in method and things have to be done differently to get the best results. It invariably takes time for men to grasp these differences during which times losses will result.

In the figures given later, depreciation of machinery is calculated on the assumption that the machine must pay for itself in five years, after which time it can be thrown away and replaced by up-to-date machines. In cases where a machine is not required full time, and can be used on other work for the rest of the time, such as for a tractor, it is assumed that if two days a week are spent on composting and four days on other work, one third of the annual depreciation is put against composting cost. It is assumed on the other hand that a muck spreader will not be used for anything else and even if used only for two days a week all the depreciation must be booked against composting costs.

It is common knowledge that output of mushrooms depends upon the quality of the composting and that poor composting can easily result in no crop at all. Peak heating, which is in effect a continuation of the composting process, certainly makes poorly composted manure better, but also has a beneficial effect on manure that has been composted with meticulous care. There is absolutely no evidence whatever that peak heating brings poorly composted manure up to the quality of well composted manure also peak heated. In fact we can be fairly safe in stating that the greater the care taken in composting the greater will be the output of mushrooms.

This point is emphasised because just as much care is needed in the short composting process as in orthodox composting: because peak heating may even be harmful if not done properly : because the value of a composting machine lies in the quality of the

manure when passed through it and not in its purchase price : because a good composting machine will produce better work than hand turning.

Let us now examine the figures for the farm cutting down on labour. This farm passed from the stage of hand turning to the use of a composting machine which cut down labour and improved the quality of the compost, and has now cut down labour again substantially by using a mechanical fork and muck spreader—labour has now been reduced but so has the quality of the compost. The results as far as we have them are :—

Method of Composting	**Hand**	**Composter**	**Fork and Spreader**
Annual labour cost	£2,100	£870	£330
Machinery depreciation	Nil	£40	£80
Total composting cost	£2,100	£910	£410
Income from sale of mushrooms	less than £50,000	£50,000	less than £50,000

Looking at these figures it is immediately clear that the change from hand to machine turning resulted in a saving of £1,200 a year. The value of changing to mechanical fork and spreader is more problematical ; there is certainly a saving of £500 in the cost of composting but this is equivalent to only one per cent. of the income. In other words if the rather indiscriminate composting by this method were to cause a fall in output of one per cent. the whole of the saving would be wiped out. It is instructive also to note that the cost of composting has become such a small item as to suggest that further economy is well nigh impossible.

However, it may be that Sinden's short composting process would show good results. The number of turns is not reduced, but the manure goes about twice as far. No confirmed evidence on cropping in this country is available, but taking the figures for this farm using the composting machine we get :—

Method of Composting	**Orthodox Process**	**Short Process**
Annual labour cost	£870	£435
Machinery depreciation	£40	£40
Bill for manure	£7,000	£3,500
Cost of manure and composting	£7,910	£3,975
Income from sale of mushrooms	£50,000	?

All we can say is that as long as output did not fall more than about seven per cent. there is a distinct advantage in the short process. It would however be a year or more before the men got the hang of the new process during which time there might be some disappointments.

Having examined this farm at some length we will now analyse some results from Noble Mushrooms Ltd.

This farm is now worked entirely on synthetic manure to the M.R.A. recommendations. The machinery used is two No. 6 DLP Composters, one Robust Chopper and one Plantool Compost Mixer for the chemicals.

It is the policy of this farm to go all out for maximum production and let the labour wages bill take second place, tending to duplicate essential machinery in order to avoid any possible hold up due to mechanical failure.

The costs of composting are :—

Annual labour cost	£1,800
Depreciation of machinery	£160
Total cost of composting	£1,960
Income from sale of mushrooms	£42,000

The composting cost is $4\frac{1}{2}\%$ of the income. It is considered that it could not be expected to reduce this by more than about 2%, and so far there is no alternative method of composting which might not easily lower yield by even more than this amount. The decision to-day is that to change the method is to court disaster.

It is also considered that the cost of machinery is so small—less than $\frac{1}{2}\%$ of income—that the risk in quality of compost by using alternative machinery is just not worth it.

To complete the picture with the short process :—

Method of Composting	**Orthodox Process**	**Short Process**
Annual labour cost	£1,800	£900
Machinery depreciation	£160	£160
Manure bill	£4,200	£2,100
Cost of manure and composting	£6,160	£3,160
Income from sale of mushrooms	£42,000	?

Here again a fall in output of 7% could be permitted without any loss in profit, but there just is no conclusive evidence available.

No attempt has been made to say that this or that machine is the best or that this or that composting process is to be preferred. It is hoped that these notes will be of some help to the grower contemplating a change.

EELWORM IN HOLLAND

The following Summary is extracted from an article in the Dutch "Tijdschrift over Plantenziekten," 57: 167-169, 1951, written by Dr. Ir. J. W. Seinhorst and Dr. P. J. Bels :

A species of *Ditylenchus*, very closely resembling *D. destructor* Thorne, 1945, was found in mushroom beds at Maastricht and elsewhere. These beds showed a diseased condition called "ruimte moeheid" (room sickness); consisting in a gradual disappearance of mycelium.

Potato tubers and petri-dish cultures of mushroom were inoculated with *Ditylenchus* from mushroom beds and with *D. destructor* from mangolds (originally from potato). The potato tubers and the mushroom mycelium were attacked by the *Ditylenchus* from both sources.

As, in addition, no consistent morphological differences could be found between *Ditylenchus destructor* and the *Ditylenchus* from mushroom beds it is considered that the *Ditylenchus* attacking mushroom mycelium is *Ditylenchus destructor* Thorne, 1945.

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THE CULTIVATED MUSHROOM—2
MORPHOLOGY

By ANDRÉ SARAZIN, Licencié ès Sciences

FIRST OF ALL, IT SHOULD BE REMEMBERED THAT THE MUSHROOM WHICH IS PICKED BY THE MUSHROOM GROWER IS ONLY THE SEED-BEARING FRUIT-BODY OR CARPOPHORE OF A FILAMENTOUS PLANT, THE MYCELIUM OR MUSHROOM SPAWN.

The mushroom spawn, consisting as it does of threads of microscopic dimensions which are very much branched and densely compacted and which insinuate themselves between the particles of the nutritive medium (compost), is therefore the vegetative portion proper of the cultivated mushroom.

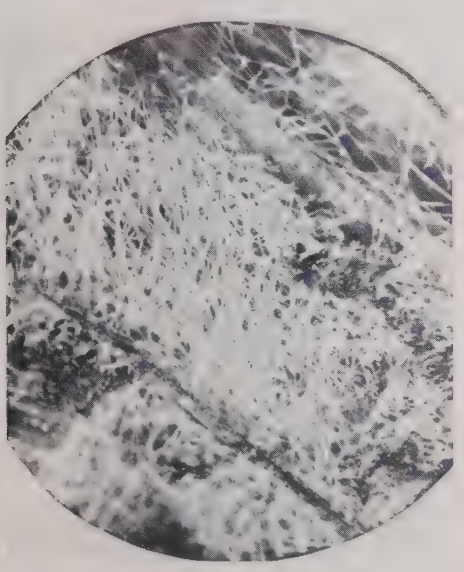

Fig. 1. Mushroom spawn showing mycelial felt between two wisps of straw. × 35.

This is a very important statement, because when the mushroom grower spawns his beds he merely transplants a young and vigorous plant to a new medium which he has prepared specially by devoting much care to the fermentation of his manure. Hence the spawn-run and the subsequent development of the spawn obviously depend on the medium which the mycelium encounters. If this medium is favourable, that is to say, is a suitably fermented manure which, through the process of fermentation, has acquired a physical structure and chemical composition answering the nutritional requirements of the cultivated mushroom, the run is rapid and the development of the spawn is strong and progressive.

Under cultural conditions it usually happens that a healthy vigorous individual gives promise of a better harvest than a weak and sickly plant. Hence the necessity for the mushroom grower to devote all

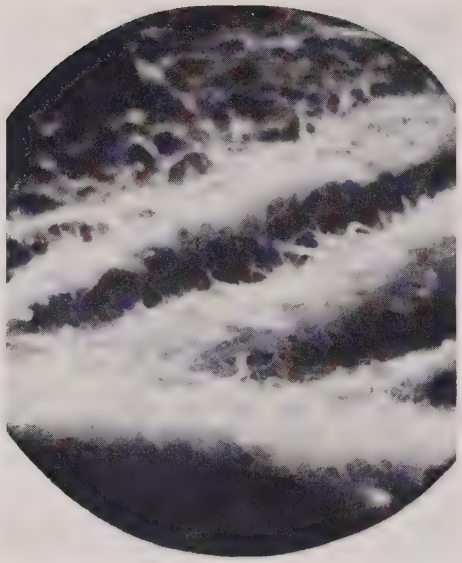

Fig. 2. Mycelial strands. × 35.

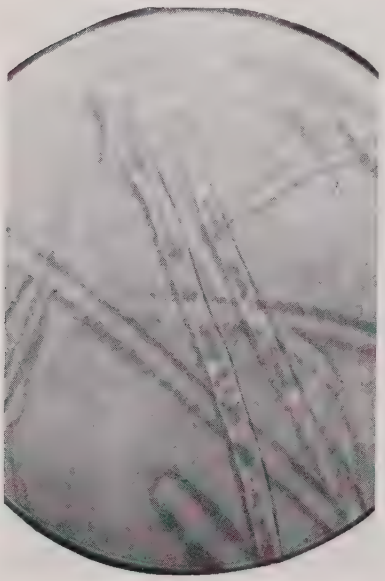

Fig. 3. Mycelial threads. × 1,000.

his attention to the compost and to the vitality of his plant, the mushroom spawn. The properties which the compost requires, as also the vital needs of the spawn during its vegetative and fruiting phases, will be revealed in due course in the chapters which follow.

Mycelium. It is a well-known fact that the first mushrooms or carpophores are found on the bed above where the spawn was planted. The spawn runs and growth then proceeds towards the interior of the bed ; the piece of spawn used as the inoculum therefore represents the oldest part of the culture. If a transverse section of a bed be made at the beginning of cropping, what is the appearance from the inside of the bed towards the casing soil ?

Inside the bed where the spawn continues to spread the mycelial threads are in full growth. They are crowded and branched but nevertheless are of delicate structure ; their appearance is bluish. Following the track taken by these threads in the course of their development it may be observed that in the direction of the casing soil a progressive thickening has occurred in parts of the filaments composing the mycelial felt. Under the digestive actions of the diastatic ferments of the mycelium the compost changes in tint from bluish to a dark red lightly suffused with violet. Here and there the mycelium reveals strands (fig. 2) ; these strands combine with one

another, fusing in parallel to grow towards the casing soil which they penetrate as thick mycelial strands and finally terminate at the base of the carpophores to which they convey the building materials.

On microscopic examination, a thread (fig. 3) appears as an elongated tube divided here and there by partitions and giving rise to branches which fuse with the branches of neighbouring threads. The mycelial strand is composed of a bundle of thick threads made up of thick cells which are shorter than the cells of growing mycelium. Fusions are numerous ; according to Hein (1930) the latter play a significant role ; they enable exchanges to take place between different parts of the mycelium. Under the microscope they are seen to be centres of cytoplasmic activity which is manifested as an actual stream of sap which ascends from cell to cell towards the carpophore. Incidentally it should be recorded that, according to my own observations in pure cultures grown on medium rich in sugar, swellings are formed which can reach several times the diameter of a normal mycelial thread and which are filled with glycogen, the reserve sugar of fungi (glycogen is to fungi what starch is to green plants) (fig. 4).

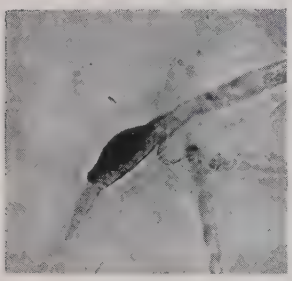

Fig. 4. Mycelial swelling. The glycogen, which is coloured reddish brown by iodine, is shown in black. × 900.

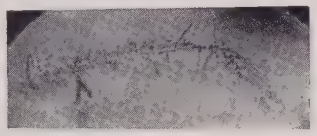

Fig. 5. Photomicrograph. × 600.

The majority of mycelial threads in the bed are surrounded by a coating of fine spicules consisting of calcium oxalate (fig. 5). According to various hypotheses (Edwards, 1950) it is not known whether this considerable amount of calcium which is deposited in the form of oxalate is the result of a detoxication process of the mycelium, necessary or accidental, or whether it is due to an intense excretion of oxalic acid which precipitates in the presence of dissolved calcium surrounding the mycelial threads. This phenomenon is met with in other fungi of both lower and higher groups. *(to be continued).*

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Translated by Dr. C. J. La Touche from Bulletin 4 of the Fédération Nationale des Syndicats Agricoles des Cultivateurs de Champignons, France.

The blocks are the property of the author, who was also responsible for the photomicrographs.

Correspondence

I feel sure that, if closer contact was maintained between the M.G.A. and **small growers**, membership would increase. To be able to air one's difficulties and receive advice on one's own place gives renewed confidence. **H. G. BIRD.**

All the details about pests, **troublesome** fumigation, etc., in "Mushroom Growing To-day" have stifled all my ambitions to grow mushrooms. I have here, for about a month now, a bag of Cropost and packet of spawn for it, not opened yet. Such is my present state of mind about mushrooms. **A POTENTIAL GROWER.**

The Worthing Show was very nicely arranged. If only retailers would display and sell mushrooms of the same beautiful kinds as those entered in the competitions ! Some mushrooms offered for sale by some retailers here in London should just not be permitted on a counter or in a window ; they are an utter disgrace and I am sure do a lot of harm to the trade. More shows like Worthing will do a lot of good. I should, however, have liked to see more trays full of growing mushrooms. **Major D. A. WILSON.**

(Why not a Class for the best-looking tray ? There are enough tray growers to make a worthwhile entry. No doubt one of the grain-spawn makers could be persuaded to offer a Challenge Cup ! EDITOR.)

KENT FARM WALK

About 60 members and friends attended the meeting arranged by the Area Committee (Messrs. G. V. Allen, G. W. Baker and W. A. B. Harding) on Saturday, 5th April, at Loddington Farm Ltd., Linton, Maidstone, by kind invitation of Mr. Gordon Smith.

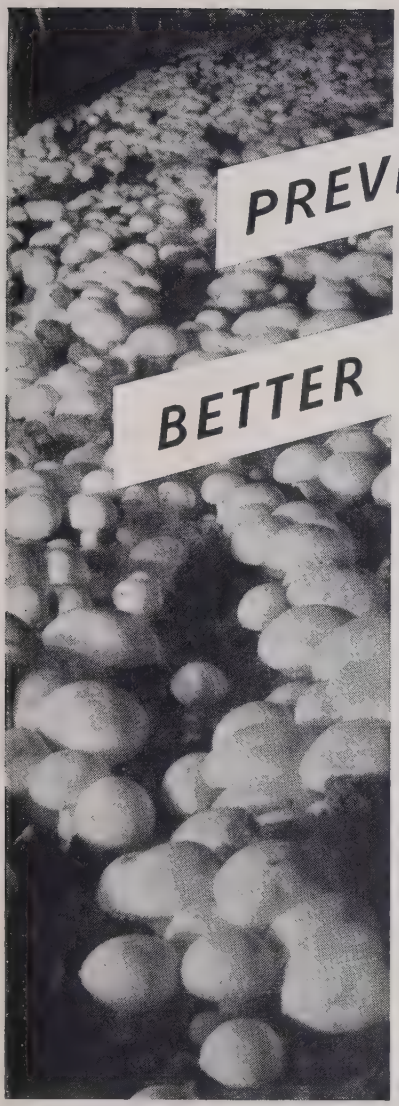
The early part of the afternoon was spent looking round the farm. It is run entirely on the shelf system and only heavy manure is used. One of the features noted during the visit was the use of 4" hot-water pipes *under the beds*, instead of in the usual position along the walls, to act as a baffle and so prevent the hot air rising too quickly. Much interest was shown in the type of casing soil used, which is dug on the site.

A most enjoyable tea was then provided in the packing room of Mr. Smith's fine fruit-storage plant. Following tea, Mr. Smith gave a talk on his method of growing and a general discussion ensued. One of the chief points discussed was the average number of pounds picked, graded and packed per person, and the general conclusion was 14-15 lb. per hour.

The evergreen topic of the use of creosote was again debated, one grower claiming it to be a preventative of the carry-over of Eelworm from one crop to the next. The same grower also claimed a bumper crop of large mushrooms from what could only be termed a creosote compost !

It was decided to hold the next Area Meeting on Saturday, 5th July, in East Sussex, the arrangement of which is in the capable hands of the Area's Joint Hon. Secs., Mrs. A. D. Jones and Mrs. G. W. Baker, who spent the entire afternoon at Maidstone making sure that all those present either were, or soon would be, members of the M.G.A.

After a year's trial, the meetings arranged by this Area have more than proved their value. Administration on the clerical side has been the main problem, but this has now been solved by Mrs. Baker and Mrs. Jones taking on the joint and honorary office of Secretary/Treasurer. We are greatly indebted to them. W.A.B.H.



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Mushroom Growers **are** exempt from the new Notification of Vacancies Order, 1952, which requires employers to engage their staff through an Employment Exchange.

N. P. EWART AGAIN

Congratulations to N. P. Ewart, of Rest Harrow Farm, West Chiltington, Pulborough, Sussex, winner of the Thwaites Cup at the Mushroom Industry Exhibition this year. He received the highest marks in the Mushroom Class at Worthing's Spring Show in April, with A. DeB. Hovell second and Greenyer Bros. third.

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